

WHAT IS CLAIMED IS:

1. An isolated polypeptide comprising:
 - a) the amino acid sequence of SEQ ID NO: 8;
 - b) the amino acid sequence of SEQ ID NO: 6, or
 - c) the amino acid sequence of SEQ ID NO: 2.
2. An antigenic polypeptide comprising:
 - a) an immunogenic amino acid sequence exhibiting identity overall length of at least 12 amino acids to SEQ ID NO: 8;
 - b) an immunogenic amino acid sequence exhibiting identity over a length of at least 12 amino acids to SEQ ID NO: 6; or
 - c) an immunogenic amino acid sequence exhibiting identity over a length of at least 12 amino acids to SEQ ID NO: 2.
3. An antigenic polypeptide of:
 - a) Claim 2a, further comprising:
 - i) a second length of identity of 12 amino acids;
 - ii) a detection or purification tag;
 - iii) a sequence of another chemokine receptor;
 - b) Claim 2b, further comprising:
 - i) a second length of identity of 12 amino acids;
 - ii) a detection or purification tag;
 - iii) a sequence of another chemokine receptor;
 - c) Claim 2c, further comprising:
 - i) a second length of identity of 12 amino acids;
 - ii) a detection or purification tag;
 - iii) a sequence of another chemokine; or

iv) a carbohydrate.

4. The polypeptide of Claim 1, which;
 - a) has a molecular weight of at least 3 kD with natural glycosylation;
 - b) is a synthetic polypeptide;
 - c) is attached to a solid substrate;
 - d) is conjugated to another chemical moiety;
 - e) is a 5-fold or less substitution from natural sequence; or
 - f) is a deletion or insertion variant from a natural sequence.

5. A composition comprising:
 - a) a sterile polypeptide of Claim 1a,
 - b) a sterile polypeptide of Claim 1b; or
 - c) a sterile polypeptide of Claim 1c.
6. A kit comprising a polypeptide of Claim 1, and:
 - a) a compartment comprising said polypeptide; and/or
 - b) instructions for use or disposal of reagents in said kit.
7. A method of using said polypeptide of Claim 1 to:
 - a) produce an antiserum, comprising immunizing an animal with said polypeptide, and isolating said antiserum; or
 - b) produce an antibody:antigen complex, comprising contacting said polypeptide with a specific antibody, thereby producing said complex.

8. A binding compound comprising an antigen binding portion from an antibody, which specifically binds to a polypeptide of Claim 1, wherein:
 - a) said binding compound is an Fv, Fab, or Fab2 fragment;

b) said binding compound is conjugated to another chemical moiety; or

c) said antibody:

5 i) is raised against a peptide sequence of a mature polypeptide of Figure 1 or Figures 3A-3C;

10 ii) is raised against a peptide sequence of a mature rodent polypeptide of Figure 5;

 iii) is immunoselected;

 iv) is a polyclonal antibody;

 v) binds to a denatured rodent CXC N4, rodent DNAXCCR10, or primate BLRx;

 vi) exhibits a Kd to antigen of at least 30 μ M;

 vii) is attached to a solid substrate, including a bead or plastic membrane;

15 viii) is in a sterile composition; or

 ix) is detectably labeled, including a radioactive or fluorescent label.

20 9. A kit comprising said binding compound of Claim 8, and:

- 25 a) a compartment comprising said binding compound; and/or
- b) instructions for use or disposal of reagents in said kit.

30 10. A composition comprising:

- a) a sterile binding compound of Claim 8; or
- b) said binding compound of Claim 8 and a carrier, wherein said carrier is:
- i) an aqueous compound, including water, saline, and/or buffer; and/or
- ii) formulated for oral, rectal, nasal, topical, or parenteral administration.

35 11. An isolated or recombinant nucleic acid encoding a polypeptide of Claim 1, wherein said nucleic acid:

- 40
35
30
25
20
15
10
- a) encodes an antigenic peptide sequence of Figure 1 or Figures 3A-3C;
 - b) encodes an antigenic rodent peptide sequence of Figure 5;
 - c) encodes a plurality of antigenic peptide sequences of Figure or Figures 3A-3C;
 - d) encodes a plurality of antigenic peptide sequences of Figures 2A-2B;
 - e) exhibits identity of at least 27 nucleotides of SEQ ID NO: 7, 5, or 1;
 - f) is an expression vector;
 - g) further comprises an origin of replication;
 - h) is from a natural source;
 - i) comprises a detectable label;
 - j) comprises synthetic nucleotide sequence;
 - k) is less than 6 kb, preferably less than 3 kb;
 - l) is from a mammal, including a rodent;
 - m) comprises a natural full length coding sequence;
 - n) is a hybridization probe for a gene encoding said protein; or
 - o) is a PCR primer, PCR product, or mutagenesis primer.

12. A cell or tissue comprising a recombinant nucleic acid of Claim 11.

- 25
- 30
- 35
- 13. The cell of Claim 12, wherein said cell is:
 - a) a prokaryotic cell;
 - b) a eukaryotic cell;
 - c) a bacterial cell;
 - d) a yeast cell;
 - e) an insect cell;
 - f) a mammalian cell;
 - g) a mouse cell;
 - h) a primate cell; or
 - i) a human cell.

14. A kit comprising said nucleic acid of Claim 11, and:

- a) a compartment comprising said nucleic acid;
- b) a compartment further comprising a polypeptide of SEQ ID NO: 8, 6, or 2; and/or
- c) instructions for use or disposal of reagents in said kit.

15. A nucleic acid which:

- a) hybridizes under wash conditions of 45° C and less than 700 mM salt to SEQ ID NO: 1;
- b) hybridizes under wash conditions of 45° C and less than 700 mM salt to SEQ ID NO: 5;
- c) hybridizes under wash conditions of 45° C and less than 700 mM salt to SEQ ID NO: 7;
- d) exhibits identity over a stretch of 30 nucleotides to SEQ ID NO: 7;
- e) exhibits identity over at least 30 nucleotides to SEQ ID NO: 5; or
- f) exhibits identity over at least 30 nucleotides to SEQ ID NO 1.

16. The nucleic acid of Claim 15, wherein:

- a) said wash conditions are at 55° C and/or 500 mM salt; or
- b) said identity is over at least 55 nucleotides.

17. The nucleic acid of Claim 16, wherein:

- a) said wash conditions are at 65° C and/or 150 mM salt; or
- b) said identity is over at least 75 nucleotides.

18. A kit comprising said nucleic acid of Claim 15, and:

- a) a compartment comprising said nucleic acid;
- b) a compartment further comprising a polypeptide of SEQ ID NO: 8, 6, or 2; and/or

c) instructions for use or disposal of reagents in said kit.

19. A method of using said nucleic acid of Claim 15:

5 a) to produce a duplex nucleic acid, comprising contacting one strand of the nucleic acid to the complementary strand, thereby producing said duplex; or

10 b) to produce a polypeptide, comprising expressing said nucleic acid in a host cell, thereby producing said polypeptide.

20. A method of screening for a compound which binds to a polypeptide of Claim 1 having SEQ ID NO: 8, comprising contacting said compound to said polypeptide, 15 and detecting binding.

21. An isolated polypeptide, comprising the amino acid sequence of SEQ ID NO:8, or a polypeptide having at least about 80% sequence homology thereto.

20

22. An isolated polynucleotide encoding the polypeptide of claim 21.

25

23. The polynucleotide of claim 22, wherein the polynucleotide comprises the nucleotide sequence of SEQ ID NO:7, or a polynucleotide having at least about 80% sequence homology thereto.

30

24. A recombinant vector comprising

(a) a polynucleotide according to claim 22; and

(b) control elements that are operably linked to said polynucleotide whereby a coding sequence within said polynucleotide can be transcribed and translated in a host cell, and at least one of said control elements is heterologous to said coding sequence.

25. A host cell transformed with the recombinant vector of claim 24.

26. A method of producing a recombinant polypeptide 5 comprising:

(a) providing a population of host cells according to claim 25; and

(b) culturing said population of cells under conditions whereby a polypeptide encoded by the coding 10 sequence present in said recombinant vector is expressed.

27. A method of expressing a recombinant polypeptide comprising:

(a) transforming a host cell with the recombinant 15 vector of claim 22; and

(b) causing expression of a polypeptide encoded by the coding sequence present in said recombinant vector.

28. The method of claim 27, wherein the host cell is 20 transformed *in vivo*.

29. The method of claim 28, wherein the host cell is in the region of a wound.

25 30. A method of treating a wound comprising:

(a) transforming a host cell *in vivo* with the polynucleotide of claim 22, wherein the host cell is in the region of a wound; and

30 (b) causing expression of a polypeptide encoded by the coding sequence present in said recombinant vector.

31. A method of treating a wound comprising modulating the *in vivo* expression of an endogenous polynucleotide in the region of the wound, wherein the 35 polynucleotide encodes a polypeptide comprising the amino acid sequence of SEQ ID NO:8.

32. The method of claim 31, wherein expression is up-regulated.

33. An antibody reactive with the polypeptide of
5 claim 21.

34. The antibody of claim 33, wherein the antibody is a polyclonal antibody.

10 35. The antibody of claim 33, wherein the antibody is a monoclonal antibody.

36. A method of treating a wound comprising
administering the antibody of claim 33 to a subject in
15 need thereof.

RECEIVED
U.S. PATENT AND TRADEMARK OFFICE